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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,854	04/27/2005	Kazuhiko Honda	52433/791	1971

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EXAMINER	
SAVAGE, JASON L	

ART UNIT	PAPER NUMBER
1794	

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01/22/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/532,854	HONDA ET AL.	
	Examiner	Art Unit	
	JASON L. SAVAGE	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10-14-09*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 10-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 10-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *20091026*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2 and 10-13 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Fumishiro et al (JP 2002-187234 English Machine Translation).

Fumishiro teaches a corrosion resistant hot-dip galvanized steel having a zinc alloy surface coating comprising 4-22 mass% Al, 1-4% Mg, up to 0.1% Ti and up to 0.5% Si (Abstract and Claim 1). Fumishiro further teaches that phases of Al/Zn/Zn_2Mg are formed (DETAILED DESCRIPTION par[0013]). Fumishiro also exemplifies embodiments wherein the Ti content is 0.02% (DETAILED DESCRIPTION par[0031]). Fumishiro teaches that the coating weight may be 120 g/m2 (DETAILED DESCRIPTION par[0030]).

Regarding the limitation that a Ti-Al intermetallic compound is formed in the recited phases and wherein the Ti-Al base intermetallic compound is present in a Zn-Al eutectoid reaction structure in which Zn phase are condensed, since Fumishiro

teaches the same alloying materials in the same amounts claimed by Applicant, one of ordinary skill in the art would expect the formation of the Ti-Al intermetallic compound in the recited phases to have been inherent. The Patent and Trademark Office can require Applicant to prove that prior art products do not necessarily or inherently possess characteristics of claimed products where claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes; burden of proof is on Applicants where rejection based on inherency under 35 U.S.C. § 102 or on prima facie obviousness under 35 U.S.C. § 103, jointly or alternatively, and Patent and Trademark Office's inability to manufacture products or to obtain and compare prior art products evidences fairness of this rejection, In re Best, Bolton, and Shaw, 195 U.S.P.Q. 431 (CCPA 1977).

In the alternative, if there is a difference, it would be minor and the claimed article would have been obvious over Fumishiro. Specific claimed alloy, whose compositions are in such close proportions to those in the prior art that, prima facie one skilled in the art would have expected them to have the same properties, must be considered to have been obvious from known alloys, Titanium Metals Corporation of America V. Banner, 227 USPQ 773.

Regarding the limitation that the coating consist of the recited elements, although Fumishiro discloses embodiments wherein B is added, it teaches that the B content may range from 0 to 0.045% (abstract). The coating containing 0% of B as taught by Fumishiro would meet the claim limitation. Furthermore, since the reference teaches that B is optional, it would have been obvious to form the coating in the absence of B.

Regarding the limitation that the intermetallic would be $TiAl_3$, Fumishiro exemplifies embodiments containing no Si (Detailed Description par. [0031]). As such, the Ti-Al intermetallic formed would be expected to be the $TiAl_3$ such as is claimed.

Regarding the limitation in claims 1-2 and 11-13 of the dendrite size, although Fumishiro is silent to the size of the dendrites in the Al phase, as evidenced in the specification on pages10-11 of the instant Application, the formation of the Ti-Al base intermetallic promotes the crystallization of dendritic nuclei of the phase materials resulting in dendrites having sizes within the range claimed.

Regarding claims 2 and 10, as was set forth above, Fumishiro teaches that up to 0.5% of Si may be contained in the plating coating. As such, the claimed Mg_2Si phase and other phases would have inherently formed since the prior art teaches the same alloying materials in the same amounts claimed by Applicant. Furthermore, the Ti-Al base intermetallic compound would be expected to be $Ti(AlSi)_3$ wherein the Si content is between 0-0.5.

Response to Arguments

Applicant's arguments filed 3-27-09 have been fully considered and have overcome the rejection to Komatsu (WO 98/26103) but is not persuasive with respect to the rejection above.

Applicant argues that in Fumishiro when Ti is present, B must also be present and since the present claims exclude the addition of B, it cannot meet the claim limitations. However, while Fumishiro discloses the addition of both Ti and B such as in

the Examples, the reference never recites that Ti must be added in combination with B as asserted by Applicant. Fumishiro clearly teaches that the coating may contain 0% of B (abs). Furthermore, there is no disclosure in Fumishiro that recites what Applicant concludes that Ti and B must be added in combination or not at all.

Therefore forming the claimed coating composition in the absence of B would be anticipated by and/or obvious in view of Fumishiro's teaching.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON L. SAVAGE whose telephone number is (571)272-1542. The examiner can normally be reached on M-F 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason Savage/
Examiner
1-13-10

/Jennifer McNeil/
Supervisory Patent Examiner, Art Unit 1794